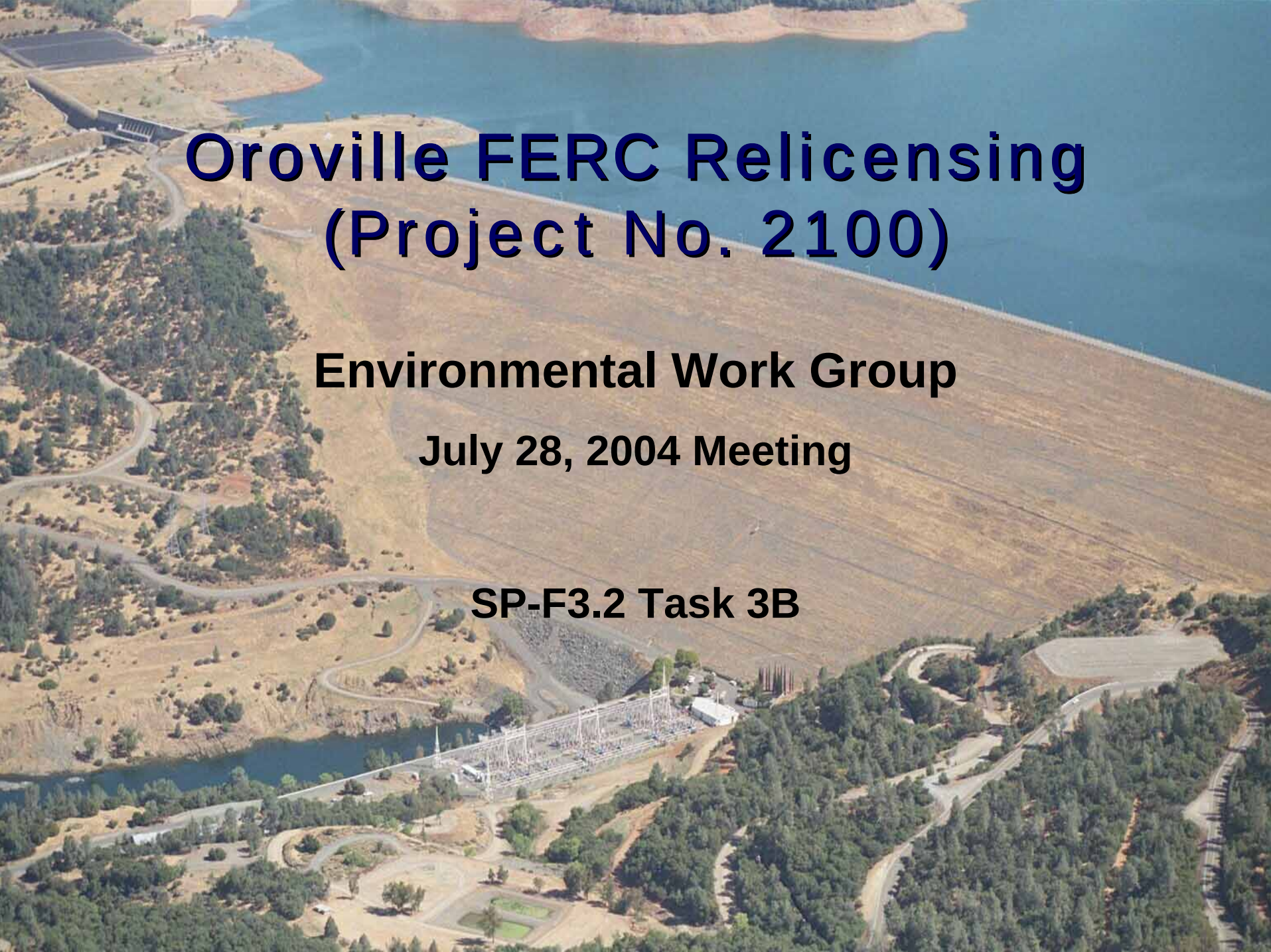


Oroville FERC Relicensing (Project No. 2100)

Environmental Work Group

July 28, 2004 Meeting

SP-F3.2 Task 3B

SP-F-3.2 Task 3B

- **ASSESSMENT OF POTENTIAL PROJECT EFFECTS ON SPLITTAIL HABITAT**

Study Plan Objectives

- **Assess potential project effects on splittail habitat availability during the splittail spawning, egg incubation, and initial rearing period.**

Approach

- **Establish splittail habitat requirements and analysis period for spawning, incubation and initial rearing**
- **Identify potential suitable habitat**
- **Determine frequency and duration of inundation of potential habitat**

Data Requirements

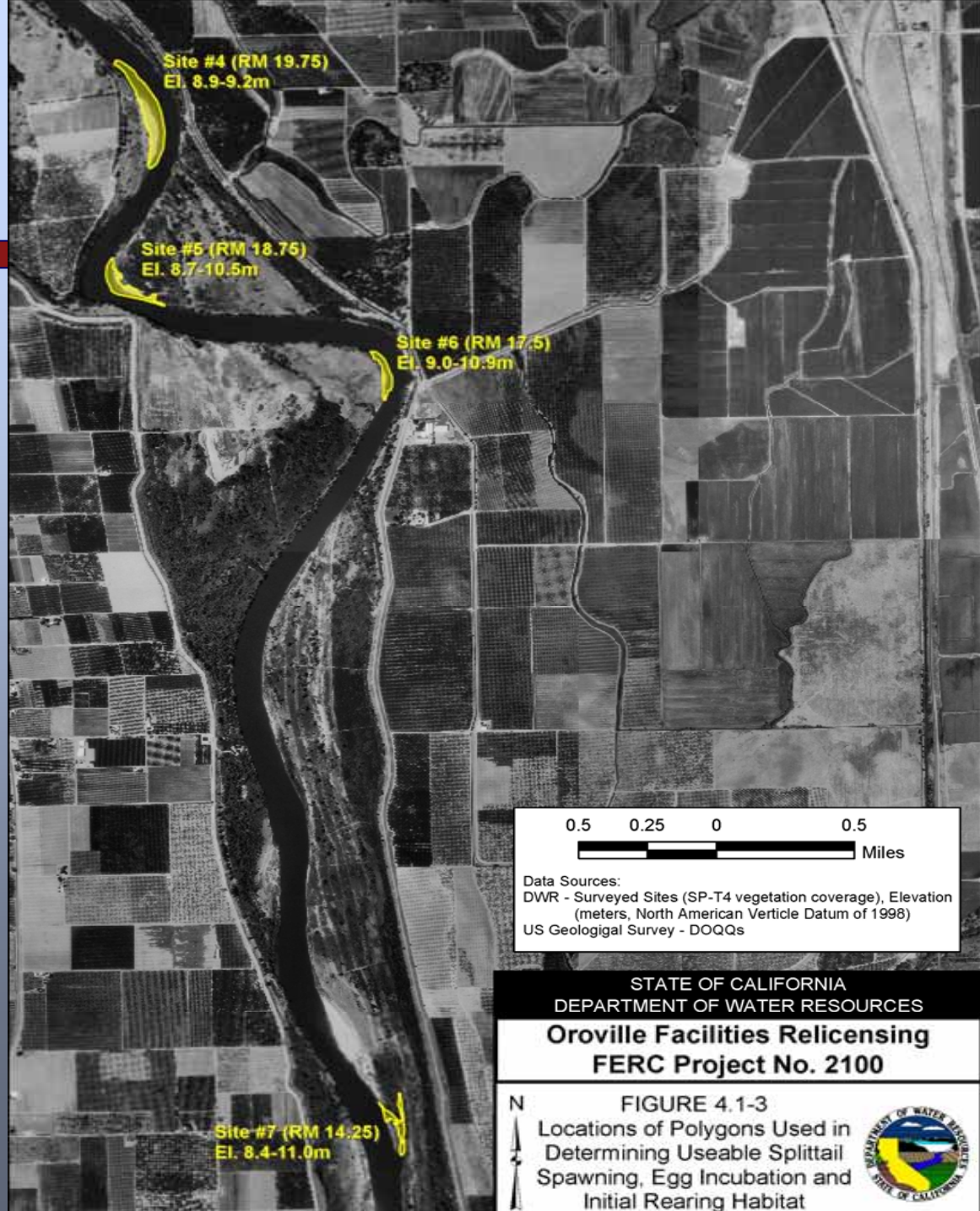
- **Literature review to define analysis period and habitat requirements**
- **Survey of lower Feather River for potential suitable habitat (SP-T4)**
- **Feather River flow records (USGS)**
- **RTK GPS Elevations of habitat units (DWR)**
- **Feather River Flow-Stage Model (SP-E1.6)**

Study Plan Results
Literature Review

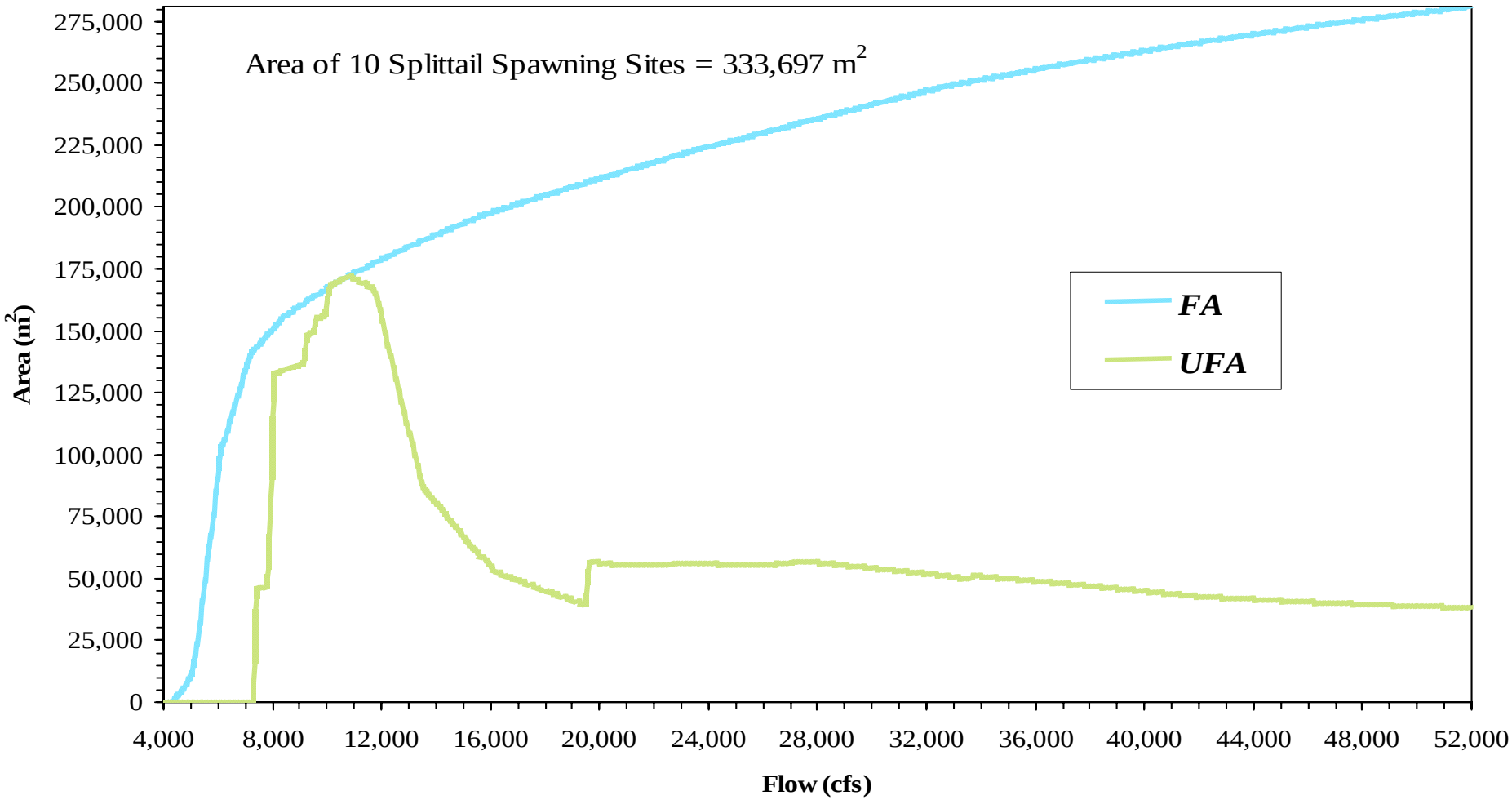
- **February through May period of analysis for splittail spawning, egg incubation, and initial rearing**
- **Habitat is generally described as submerged vegetation typically found in riparian zones flooded to a depth between three and six feet**

Potential Habitat

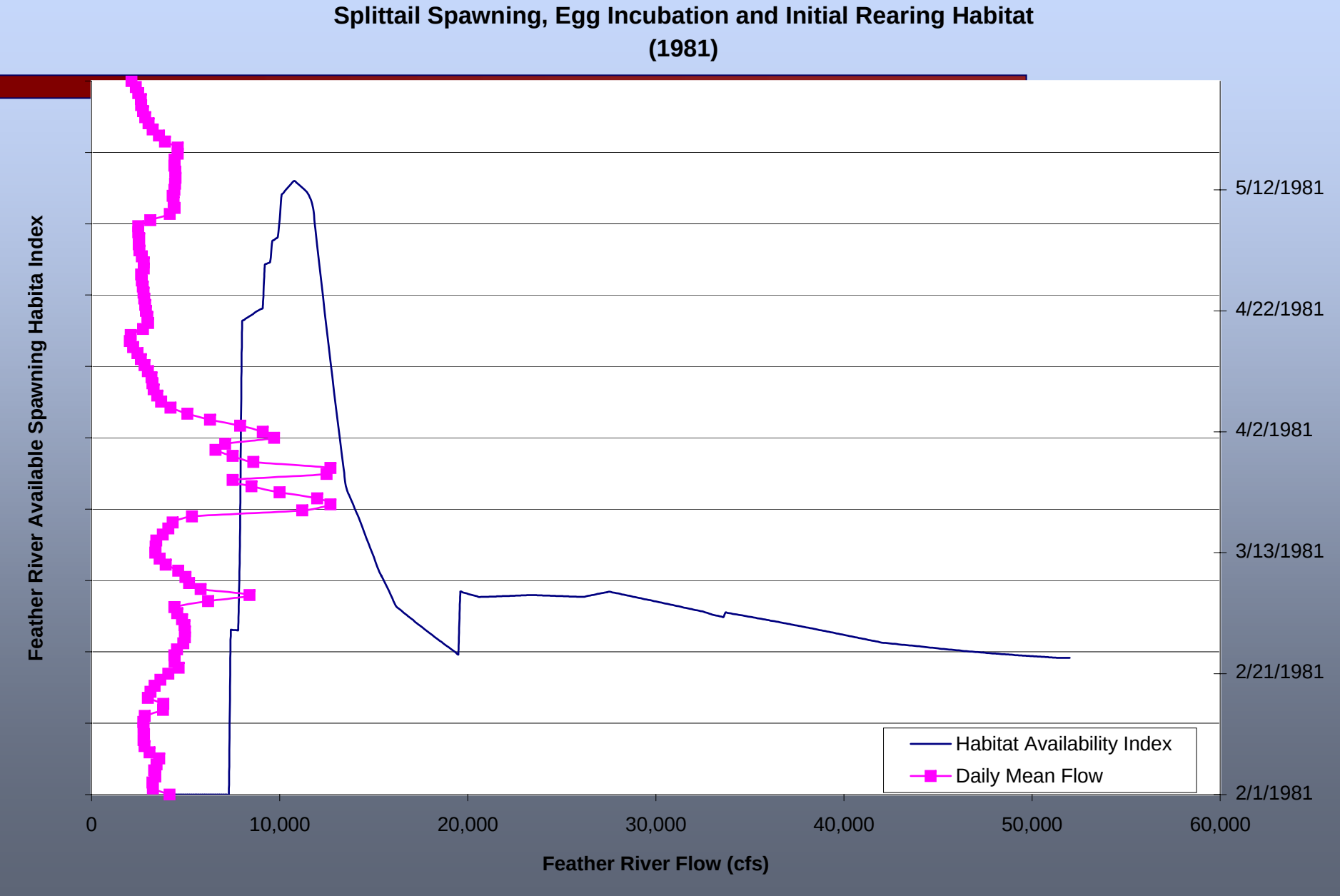
- **Grass and shrub vegetation classes**
  (gravel/sandbar, mixed emergent)
- **High and low elevations per habitat unit**
  (23% surveyed)



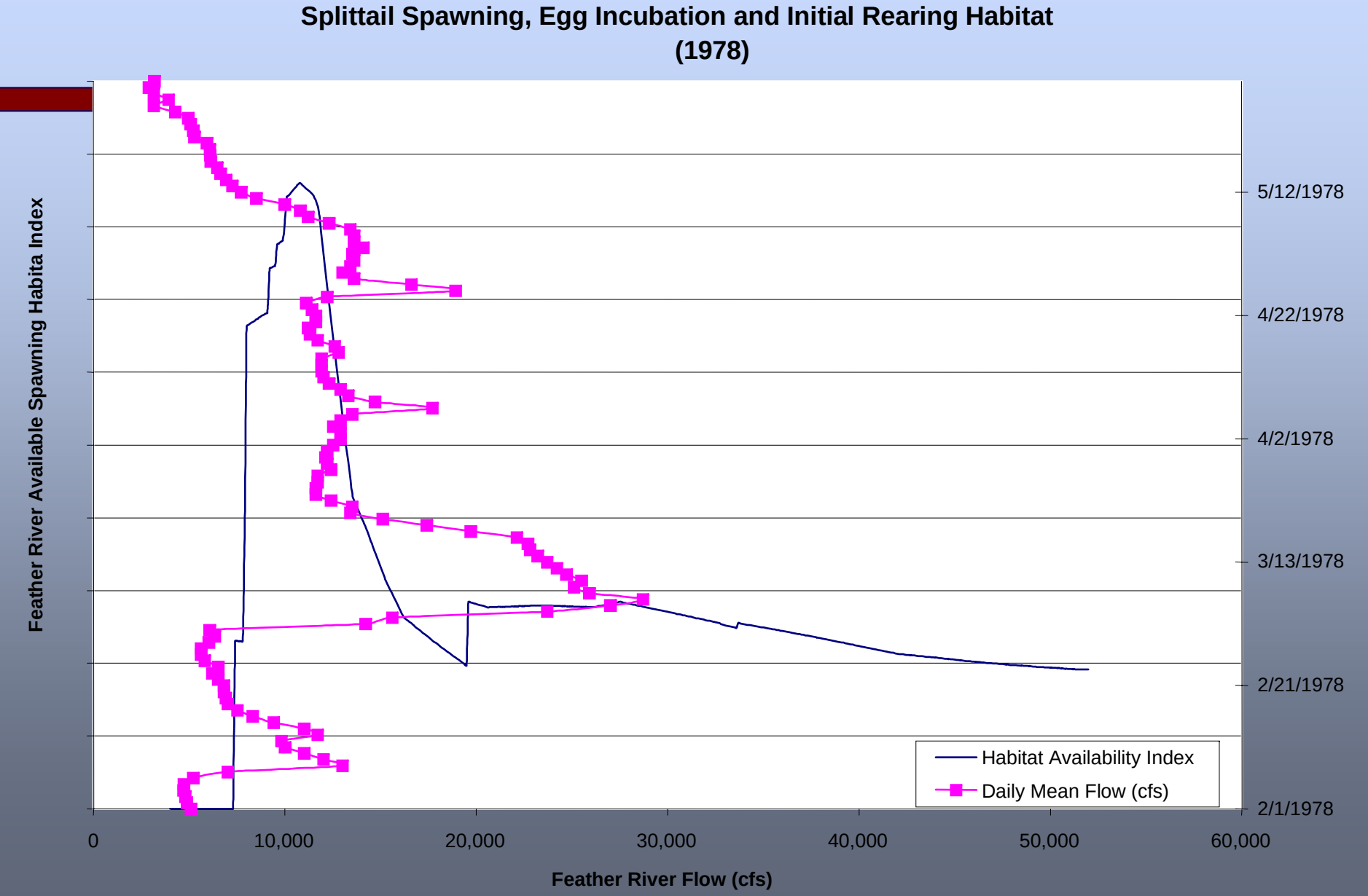
Usable Flooded Area



Feather River Flows vs. Habitat Index



Feather River Flows vs. Habitat Index



Results – 21 Year Period of Record

- 8 years were described as producing strong year-classes, which correlated to high flows in the Feather River
- 7 years produced either intermediate or unknown year-class strengths, which correlated with intermediate flows in the Feather River
- 6 years were described as producing weak year-classes, which correlated to low flows in the Feather River

Conclusions

- **Relative importance of splittail habitat availability in the lower Feather River is unknown**
- **Splittail habitat suitable for spawning, egg incubation, and initial rearing does exist in the lower Feather River**
- **Relatively long life span, broad environmental tolerances, and high fecundity of splittail allows rapid population recovery, even after several consecutive years of drought, Sommer et al. (1997)**
- **Feather River flows and duration of habitat inundation are highly correlated with splittail year-class strength**